

THE AUTOSPORADIC SEEDS OF *OXALIS STRICTA*.

BY ERNEST WALKER.

The effective method this plant has of scattering its mature seeds, in which it proves to be a decided "touch-me-not" seems hitherto to have escaped observation. In Gray's Manual, and other like works, the seeds are spoken of as having a "loose and separating" coat, but the part this envelope plays in dehiscence and in the distribution of the species is not mentioned.

In May, 1891, I made some careful observations, and the following memoranda:—

As the seeds of *Oxalis stricta* L. attain maturity, the erect loculicidal capsule becomes flaccid. In this condition the least disturbance, as the touch of the hand or shaking by the wind, causes the seeds to be expelled with considerable force, and thrown two or three feet. Sitting for a few minutes by a plant, the tick of the seeds as they were continually projected could be distinctly heard. To place a capsule in the palm of the hand, and press it, suggested the bursting of pop-corn.

The shooting of the seed was done so quickly that it was some time before I could make out the manner in which it was accomplished.

The active agent is the outer coat of the seed. This consists of a translucent, shining, membraneous envelope stretched tightly over the seed. When it bursts, it suddenly and elastically turns inside-out; after which it becomes flaccid.

This coat is thicker in a line along the ventral margin of the pendulous seed, or along the edge which is next the axis of the capsule. The rupture is naturally along the opposite edge. Doubling back against the axis of the upright capsule gives this membraneous coat, or spermoderm the power to project the seed.

Placing some of the seeds under a lens and puncturing the coat with a needle the rupture was found to occur at other parts than the margin, or at any point the coat might be pricked. In this instance the envelope not having a "back-stop" was often thrown farther than the seed.

When in the capsule the position of the seeds is such as to throw them not only outward but slightly upward. They are cast farther than if projected horizontally. Some seeds were found as far as three feet from the capsule from which they were thrown.